(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/088313 A1

(51) International Patent Classification[7]: G01N 33/543, 33/58

(21) International Application Number: PCT/FI2004/000204

(22) International Filing Date: 2 April 2004 (02.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/459,374 2 April 2003 (02.04.2003) US
20030615 24 April 2003 (24.04.2003) FI

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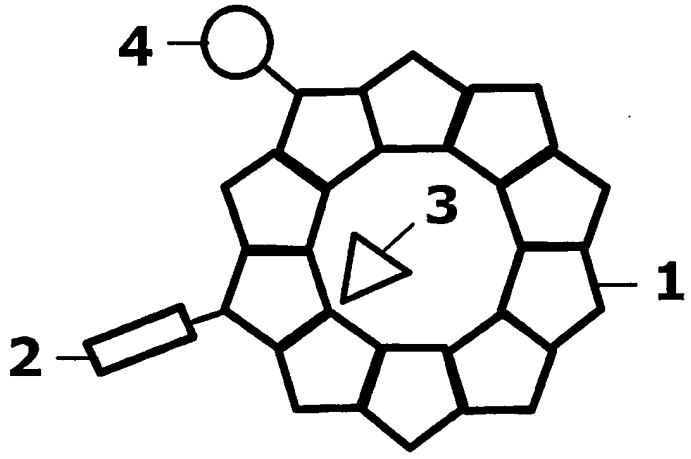
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NANOPARTICLE FOR BIOAFFINITY ASSAYS



(57) **Abstract:** Thus this invention relates to a nanoparticle, useful for bioaffinity assays. The nanoparticle has a self-assembling shell built up of several protein and/or peptide subunits, which protein and/or peptide subunits can be of one or several different types, assembled in an organized manner to form the shell having an inner surface facing the inside and an outer surface facing the outside of said particle. One or several of the types of subunits have one or several first binding moieties per type of subunit with the binding moiety facing the outside of the particle for binding of any specific ligand binding protein; and the particle contains within its shell a marker and/or one or several of the types of subunits have one or several second binding moieties per type of subunit with the binding moiety facing the inside and/or the outside of the particle for binding a marker; and the marker or markers enables detection of the particle. Characteristic for the nanoparticle is that the shell of the nanoparticle is a recombinant apoferritin or an apoferritin-like particle. This invention also relates to a bioaffinity assays using the nanoparticle. This invention further relates to a kit for bioaffinity assays comprising the nanoparticle.

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